

## CLAIMS

What is claimed is:

1. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask volume, an ask time, a security identifier and a market maker identifier for each ask; and

analyzing the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes summing the volume of each active bid associated with each selected security and summing the volume of each active ask associated with each selected security.

2. The method according to claim 1, wherein the total bid volume for each selected security and the total ask volume for each selected security are converted into relative bid volume and relative ask volume.

3. The method according to claim 2, further comprising the step of displaying the relative bid volume and relative ask volume.

4. The method according to claim 1, further comprising the step of displaying the total bid volume and the total ask volume for the selected set of securities in a table.

5. The method according to claim 4, further comprising the step of dynamically sorting the table based on a parameter selected by the user to reflect current market maker activity.

6. The method according to claim 1, further comprising the steps of summing the total number of market makers having an active bid associated with each selected security and summing the total number of market makers having an active ask associated with each selected security.

7. The method according to claim 6, further comprising the step of displaying the total number of market makers having an active bid and the total number of market makers having an active ask.

8. The method according to claim 1, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

9. The method according to claim 8, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

10. The method according to claim 1, further comprising the step of storing the statistic derived for each security, the stored statistics adapted for display as historical market maker activity.

11. The method according to claim 1, wherein the statistics are updated on a periodic basis.

12. The method according to claim 1, further comprising the step of generating an alert if the statistic for one of the selected securities crosses a threshold value.

13. The method according to claim 12, wherein the threshold value is globally established for all selected securities from the selected set of securities.

14. The method according to claim 12, wherein the threshold value is established for a specific security.

15. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

analyzing the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes determining whether a bid placed by any of the market makers has a value higher than, the same as or lower than the previous bid placed by the same market maker and determining whether an ask placed by any of the market makers has a value higher than, the same as or lower than the previous ask placed by the same market maker.

16. The method according to claim 15, wherein the analyzing step, for each selected security, further includes deriving buy pressure by counting the active bids that have increased in price and reducing the number of bids that have increased in price by the number of active bids that have decreased in price and

deriving sell pressure by counting the active asks that have increased in price and reducing the number of asks that have increased in price by the number of active asks that have decreased in price.

17. The method according to claim 16, wherein the analyzing step, for each selected security, further includes converting buy pressure to relative buy pressure by dividing the buy pressure by the number of market makers having active bids for the security and converting sell pressure to relative sell pressure by dividing the sell pressure by the number of market makers having active asks for the security.

18. The method according to claim 16, wherein the analyzing step, for each selected security, further includes deriving pressurized bid volume by summing the bid volume for each active bid that has increased in price and subtracting the bid volume for each active bid that has decreased in price, and deriving pressurized ask volume by summing the ask volume for each active ask that has increased in price and subtracting the ask volume for each active ask that has decreased in price.

19. The method according to claim 16, wherein the step of analyzing further includes summing the volume of each active bid associated with each selected security and summing the volume of each active ask associated with each selected security.

20. The method according to claim 16, further comprising the step of displaying the buy pressure and the sell pressure for the selected set of securities in a table.

21. The method according to claim 20, further comprising the step of dynamically sorting the table based on a parameter selected by the user to reflect current market maker activity.

22. The method according to claim 15, wherein the step of analyzing further includes summing the volume of each active bid associated with each selected security and summing the volume of each active ask associated with each selected security.

23. The method according to claim 22, wherein the total bid volume for each selected security and the total ask volume for each selected security are converted into relative bid volume and relative ask volume.

24. The method according to claim 15, further comprising the steps of summing the total number of market makers having an active bid associated with each selected security and summing the total number of market makers having an active ask associated with each selected security.

25. The method according to claim 15, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

26. The method according to claim 25, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

27. The method according to claim 15, further comprising the step of storing the statistic derived for each security, the stored statistics adapted for display as historical market maker activity.

28. The method according to claim 15, wherein the statistics are updated on a periodic basis.

29. The method according to claim 15, further comprising the step of generating an alert if the statistic for one of the selected securities crosses a threshold value.

30. The method according to claim 29, wherein the threshold value is globally established for all selected securities from the selected set of securities.

31. The method according to claim 29, wherein the threshold value is established for a specific security.

32. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

analyzing the data stream to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for a selected market maker and updated based on the updated data stream, wherein deriving the statistic includes identifying each security from a selected set of securities for which the selected market maker has at least one of an active bid or an active ask, and for the selected market maker generating a list of the identified securities along with an indication of the market maker's bid volume and ask volume for the identified securities.

33. The method according to claim 32, wherein the indication of the market maker's bid volume and ask volume is relative bid volume and relative ask volume.

34. The method according to claim 32, further comprising the step of displaying the list of identified securities and the indication of the selected market maker's bid volume and ask volume for the identified securities in a table.

35. The method according to claim 34, further comprising the step of dynamically sorting the table based on a parameter selected by the user to reflect current market maker activity.

36. The method according to claim 32, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

37. The method according to claim 36, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

38. The method according to claim 32, further comprising the step of storing the statistic derived for each market maker, the stored statistics adapted for display as historical market maker activity.

39. The method according to claim 32, wherein the statistics are updated on a periodic basis.

40. The method according to claim 32, further comprising the step of generating an alert if the statistic for the selected market maker crosses a threshold value.

41. The method according to claim 40, wherein the threshold value is globally established for all market makers.

42. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

analyzing the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes determining the combined bid volume and ask volume for each market maker for each selected security from the selected set of securities.

43. The method according to claim 42, wherein the combined bid volume and the combined ask volume are converted into relative bid volume and relative ask volume.

44. The method according to claim 42, further comprising the step of displaying the securities and market makers by highest combined bid volume and ask volume in a table.

45. The method according to claim 44, further comprising the step of dynamically sorting the table based on a parameter selected by the user to reflect current market maker activity.



46. The method according to claim 42, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

47. The method according to claim 46, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

48. The method according to claim 42, further comprising the step of storing the statistic derived for each security, the stored statistics adapted for display as historical market maker activity.

49. The method according to claim 42, wherein the statistics are updated on a periodic basis.

50. The method according to claim 42, further comprising the step of generating an alert if the statistic for one of the selected securities crosses a threshold value.

51. The method according to claim 50, wherein the threshold value is globally established for all selected securities from the selected set of securities.

52. The method according to claim 50, wherein the threshold value is established for a specific security.

53. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

analyzing the data stream to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each market maker and updated based on the updated data stream, wherein deriving the statistic includes for each market maker, summing the bid volume of each active bid of each market maker for a selected set of securities and summing the ask volume of each active ask of each market maker for a selected set of securities.

54. The method according to claim 53, wherein the sum of the bid volume and the sum of the ask volume are converted into relative bid volume and relative ask volume.

55. The method according to claim 53, wherein the analyzing step further includes:

determining whether a bid placed by any of the market makers has a value higher than, the same as or lower than the previous bid placed by the same market maker for the same security, and determining whether an ask placed by any of the market makers has a value higher than, the same as or lower than the previous ask placed by the same market maker for the same security; and

for each market maker, deriving market maker buy pressure by counting the active bids for the market maker for the selected set of securities that have increased in price and reducing the number of bids that have increased in price by the number of active bids for the market maker for the selected set of securities that have decreased in price and deriving market maker sell pressure by counting the active asks for the market maker for the selected set of securities that have increased in price and reducing the number of asks that have increased in price by

the number of active asks for the market maker for the selected set of securities that have decreased in price.

56. The method according to claim 53, further comprising the step of displaying an indication of the total bid volume and an indication of the total ask volume for each market maker in a table.

57. The method according to claim 56, further comprising the step of dynamically sorting the table based on a parameter selected by the user to reflect current market maker activity.

58. The method according to claim 53, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

59. The method according to claim 58, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

60. The method according to claim 53, further comprising the step of storing the statistic derived for each market maker, the stored statistics adapted for display as historical market maker activity.

61. The method according to claim 53, wherein the statistics are updated on a periodic basis.

62. The method according to claim 53, further comprising the step of generating an alert if the statistic for one of the selected market makers crosses a threshold value.

63. The method according to claim 62, wherein the threshold value is globally established for all market makers.

64. The method according to claim 62, wherein the threshold value is established for a specific market maker.

65. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

analyzing the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes for each selected security and over a specified time period, determining a bid persistence statistic and an ask persistence statistic for each market maker, the bid persistence statistic determined by calculating the approximate portion of the specified time period that the market maker has had one or more bids being equal to or higher than a level 1 bid for the security, and the ask persistence statistic determined by calculating the approximate portion of the specified time period that the market has had one or more asks being equal to or lower than a level 1 ask for the security.

66. The method according to claim 65, wherein the bid persistence statistic and an ask persistence statistic are respectively calculated by determining the percentage of the time period for which the market maker has had one or more bids equal to or higher than a level 1 bid for the security and determining the percentage of the time period for which the market has had one or more asks being equal to or lower than a level 1 ask for the security.

67. The method according to claim 65, wherein the bid persistence statistic and an ask persistence for each market maker are respectively calculated by:

dividing the specified time period into a plurality of segments;

for each segment and for each security, assigning the market maker a bid value and an ask value of one or zero, a bid value of one being assigned when the market maker has a bid being equal to or higher than a level 1 bid for the security, otherwise a bid value of zero is assigned and an ask value of one being assigned when the market has an ask being equal to or lower than a level 1 ask for the security, otherwise an ask value of zero is assigned; and

solving the equation:

$$100 \left( \Sigma VAL_p + \frac{CV - \Sigma VAL_p}{m} \right)$$

for both bid values and ask values, wherein  $\Sigma VAL_p$  is the sum of all values calculated by the equation one segment earlier,  $m$  is the number of segments in the time period and  $CV$  is the respective current bid value and current ask value assigned to the market maker for the security.

68. The method according to claim 65, further comprising the step of displaying the bid and ask persistence statistics in a table.

69. The method according to claim 68, further comprising the step of dynamically sorting the table based on a parameter selected by the user to reflect current market maker activity.

70. The method according to claim 65, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

71. The method according to claim 70, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

72. The method according to claim 65, further comprising the step of filtering securities from the selected set of securities that have a trade volume below a volume threshold.

73. The method according to claim 65, further comprising the step of storing the statistic derived for each security, the stored statistics adapted for display as historical market activity.

74. The method according to claim 65, wherein the statistics are updated on a periodic basis.

75. The method according to claim 65, further comprising the step of generating an alert if the statistic for one of the selected securities crosses a threshold value.

76. The method according to claim 75, wherein the threshold value is globally established for all selected securities within the selected set of securities.

77. The method according to claim 75, wherein the threshold value is established for a specific security.

78. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

dynamically filtering the data stream, including for each selected security from a selected set of securities, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus the selected threshold percentage of the last trade value.

79. The method according to claim 78, wherein the filtering step includes discarding bids having a price higher than the last trade value plus the selected threshold percentage of the last trade value and discarding asks having a price lower than the last trade value minus the selected threshold percentage of the last trade value.

80. The method according to claim 78, wherein the filtering step is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived.

81. The method according to claim 80, further comprising the step of analyzing each data set for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic being calculated and updated for each selected security for each data set.

82. The method according to claim 78, further comprising the step of analyzing the filtered data stream for a selected set of securities from the plurality of

securities to derive and update a statistic indicative of temporary upward or downward price pressure.

83. The method according to claim 78, further comprising the step of crossed market filtering the data stream to exclude bids that are higher than a level 1 bid for an associated security and asks that are lower than a level 1 ask for an associated security.

84. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask;

analyzing the data stream for a selected set of securities from the plurality of securities to derive a set of statistics indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream; and

dynamically sorting a displayed order of the set of statistics based on a parameter selected by the user to reflect current market maker activity.

85. The method according to claim 84, further including the step of turning the dynamic sorting off so that a relative display order stays constant but the statistic for each selected security is updated.

86. The method according to claim 84, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade



value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

87. The method according to claim 86, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

88. The method according to claim 84, wherein the statistics are updated on a periodic basis.

89. The method according to claim 88, wherein the statistics are displayed on a display on a periodic basis.

90. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask;

analyzing the data stream for a selected set of securities from the plurality of securities to derive a set of statistics from the level 2 data indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream; and

charting the statistic over a period of time for one of the selected securities in a chart.

91. A method of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the method comprising the steps of:

receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask;

analyzing the data stream for a selected set of securities from the plurality of securities to derive a set of statistics indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream;

grouping the bids by price to generate a series of bid price groups, each bid price group but one containing bids of the same price for the bid price group, the remaining bid price group containing all bids having a price more than a specified number of price changes away from an inside bid price;

summing the volume of bids in each bid price group and summing the number of bids in each bid price group;

displaying the total volume for each bid price group and the number of bids in each bid price group;

grouping the asks by price to generate a series of ask price groups, each ask price group but one containing asks of the same price for the ask price group, the remaining ask price groups containing all asks having a price more than a specified number of price changes away from an inside ask price;

summing the volume of asks in each ask price group and summing the number of asks in each ask price group; and

displaying the total volume for each price group and the number of asks in each ask price group.

92. The method according to claim 91, wherein before the analyzing step, the method further comprises the step of filtering the data stream, the step of

filtering including for each selected security, discarding bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discarding asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

93. The method according to claim 92, wherein the step of filtering is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

94. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask volume, an ask time, a security identifier for and a market maker identifier for each ask; and

a process or executory logic to analyze the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes summing the volume of each active bid associated with each selected security and summing the volume of each active ask associated with each selected security.

95. The system according to claim 94, wherein the total bid volume for each selected security and the total ask volume for each selected security are converted into relative bid volume and relative ask volume.

96. The system according to claim 95, further comprising a display for displaying the relative bid volume and relative ask volume.

97. The system according to claim 94, further comprising a display for displaying the total bid volume and the total ask volume for the selected set of securities in a table.

98. The system according to claim 97, wherein the logic dynamically sorts the table based on a parameter selected by the user to reflect current market maker activity.

99. The system according to claim 94, wherein the logic sums the total number of market makers having an active bid associated with each selected security and sums the total number of market makers having an active ask associated with each selected security.

100. The system according to claim 99, further comprising a display for displaying the total number of market makers having an active bid and the total number of market makers having an active ask.

101. The system according to claim 94, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

102. The system according to claim 101, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

103. The system according to claim 94, further comprising a memory for storing the statistic derived for each security, the stored statistics adapted for display as historical market maker activity.

104. The system according to claim 94, wherein the statistics are updated on a periodic basis.

105. The system according to claim 94, wherein the logic generates an alert if the statistic for one of the selected securities crosses a threshold value.

106. The system according to claim 105, wherein the threshold value is globally established for all selected securities from the selected set of securities.

107. The system according to claim 105, wherein the threshold value is established for a specific security.

108. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

a processor for executing logic to analyze the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes determining whether a bid placed by any of the market makers has a value higher than, the same as or lower than the previous bid placed by the same market maker and determining whether an ask placed by any of the market

makers has a value higher than, the same as or lower than the previous ask placed by the same market maker.

109. The system according to claim 108, wherein the logic for each selected security derives buy pressure by counting the active bids that have increased in price and reducing the number of bids that have increased in price by the number of active bids that have decreased in price and derives sell pressure by counting the active asks that have increased in price and reducing the number of asks that have increased in price by the number of active asks that have decreased in price.

110. The system according to claim 109, wherein the logic for each selected security converts buy pressure to relative buy pressure by dividing the buy pressure by the number of market makers having active bids for the security and converts sell pressure to relative sell pressure by dividing the sell pressure by the number of market makers having active asks for the security.

111. The system according to claim 109, wherein the logic for each selected security derives pressurized bid volume by summing the bid volume for each active bid that has increased in price and subtracting the bid volume for each active bid that has decreased in price, and derives pressurized ask volume by summing the ask volume for each active ask that has increased in price and subtracting the ask volume for each active ask that has decreased in price.

112. The system according to claim 109, wherein the logic sums the volume of each active bid associated with each selected security and sums the volume of each active ask associated with each selected security.

113. The system according to claim 109, further comprising a display for displaying the buy pressure and the sell pressure for the selected set of securities in a table.

114. The system according to claim 113, wherein the logic dynamically sorts the table based on a parameter selected by the user to reflect current market maker activity.

115. The system according to claim 108, wherein the logic sums the volume of each active bid associated with each selected security and sums the volume of each active ask associated with each selected security.

116. The system according to claim 115, wherein the total bid volume for each selected security and the total ask volume for each selected security are converted into relative bid volume and relative ask volume.

117. The system according to claim 108, wherein the logic sums the total number of market makers having an active bid associated with each selected security and sums the total number of market makers having an active ask associated with each selected security.

118. The system according to claim 108, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

119. The system according to claim 118, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

120. The system according to claim 108, further comprising a memory for storing the statistic derived for each security, the stored statistics adapted for display as historical market maker activity.

121. The system according to claim 108, wherein the statistics are updated on a periodic basis.

122. The system according to claim 108, wherein the logic generates an alert if the statistic for one of the selected securities crosses a threshold value.

123. The system according to claim 122, wherein the threshold value is globally established for all selected securities from the selected set of securities.

124. The system according to claim 122, wherein the threshold value is established for a specific security.

125. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

a processor for executing logic to analyze the data stream to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for a selected market maker and updated based on the updated data stream, wherein deriving the statistic includes identifying each security from a selected set of securities for which the selected market maker has at least one of an active bid or an active ask, and for the selected market maker generating a list of the identified securities along with an indication of the market maker's bid volume and ask volume for the identified securities.



126. The system according to claim 125, wherein the indication of the market maker's bid volume and ask volume is relative bid volume and relative ask volume.

127. The system according to claim 125, further comprising a display for displaying the list of identified securities and the indication of the selected market maker's bid volume and ask volume for the identified securities in a table.

128. The system according to claim 127, wherein the logic dynamically sorts the table based on a parameter selected by the user to reflect current market maker activity.

129. The system according to claim 125, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

130. The system according to claim 129, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

131. The system according to claim 125, further comprising a memory for storing the statistic derived for each market maker, the stored statistics adapted for display as historical market maker activity.

132. The system according to claim 125, wherein the statistics are updated on a periodic basis.

133. The system according to claim 125, wherein the logic generates an alert if the statistic for the selected market maker crosses a threshold value.

134. The system according to claim 133, wherein the threshold value is globally established for all market makers.

135. A system of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

a processor for executing logic to analyze the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes determining the combined bid volume and ask volume for each market maker for each selected security from the selected set of securities.

136. The system according to claim 135, wherein the combined bid volume and the combined ask volume are converted into relative bid volume and relative ask volume.

137. The system according to claim 135, further comprising a display for displaying the securities and market makers by highest combined bid volume and ask volume in a table.

138. The system according to claim 137, wherein the logic dynamically sorts the table based on a parameter selected by the user to reflect current market maker activity.

139. The system according to claim 135, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

140. The system according to claim 139, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

141. The system according to claim 135, further comprising a memory for storing the statistic derived for each security, the stored statistics adapted for display as historical market maker activity.

142. The system according to claim 135, wherein the statistics are updated on a periodic basis.

143. The system according to claim 135, wherein the logic generates an alert if the statistic for one of the selected securities crosses a threshold value.

144. The system according to claim 143, wherein the threshold value is globally established for all selected securities from the selected set of securities.

145. The system according to claim 143, wherein the threshold value is established for a specific security.

146. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one

exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

a processor for executing logic to analyze the data stream to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each market maker and updated based on the updated data stream, wherein deriving the statistic includes for each market maker, summing the bid volume of each active bid of each market maker for a selected set of securities and summing the ask volume of each active ask of each market maker for a selected set of securities.

147. The system according to claim 146, wherein the sum of the bid volume and the sum of the ask volume are converted into relative bid volume and relative ask volume.

148. The system according to claim 146, wherein the logic:  
determines whether a bid placed by any of the market makers has a value higher than, the same as or lower than the previous bid placed by the same market maker for the same security, and determines whether an ask placed by any of the market makers has a value higher than, the same as or lower than the previous ask placed by the same market maker for the same security; and

for each market maker, derives market maker buy pressure by counting the active bids for the market maker for the selected set of securities that have increased in price and reducing the number of bids that have increased in price by the number of active bids for the market maker for the selected set of securities that have decreased in price and derives market maker sell pressure by counting the active asks for the market maker for the selected set of securities that have increased in price and reducing the number of asks that have increased in price by the number of active asks for the market maker for the selected set of securities that have decreased in price.

149. The system according to claim 146, further comprising a display for displaying an indication of the total bid volume and an indication of the total ask volume for each market maker in a table.

150. The system according to claim 149, wherein the logic dynamically sorts the table based on a parameter selected by the user to reflect current market maker activity.

151. The system according to claim 146, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

152. The system according to claim 151, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

153. The system according to claim 146, further comprising a memory for storing the statistic derived for each market maker, the stored statistics adapted for display as historical market maker activity.

154. The system according to claim 146, wherein the statistics are updated on a periodic basis.

155. The system according to claim 146, wherein the logic generates an alert if the statistic for one of the selected market makers crosses a threshold value.

156. The system according to claim 155, wherein the threshold value is globally established for all market makers.

157. The system according to claim 155, wherein the threshold value is established for a specific market maker.

158. A system of tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

a processor for executing logic to analyze the data stream for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream, wherein deriving the statistic includes for each selected security and over a specified time period, determining a bid persistence statistic and an ask persistence statistic for each market maker, the bid persistence statistic determined by calculating the approximate portion of the specified time period that the market maker has had one or more bids being equal to or higher than a level 1 bid for the security, and the ask persistence statistic determined by calculating the approximate portion of the specified time period that the market has had one or more asks being equal to or lower than a level 1 ask for the security.

159. The system according to claim 158, wherein the bid persistence statistic and an ask persistence statistic are respectively calculated by determining the percentage of the time period for which the market maker has had one or more bids equal to or higher than a level 1 bid for the security and determining the percentage of the time period for which the market has had one or more asks being equal to or lower than a level 1 ask for the security.

160. The system according to claim 158, wherein the bid persistence statistic and an ask persistence for each market maker are respectively calculated by:

dividing the specified time period into a plurality of segments;

for each segment and for each security, assigning the market maker a bid value and an ask value of one or zero, a bid value of one being assigned when the market maker has a bid being equal to or higher than a level 1 bid for the security, otherwise a bid value of zero is assigned and an ask value of one being assigned when the market has an ask being equal to or lower than a level 1 ask for the security, otherwise an ask value of zero is assigned; and

solving the equation:

$$100 \left( \Sigma VAL_p + \frac{CV - \Sigma VAL_p}{m} \right)$$

for both bid values and ask values, wherein  $\Sigma VAL_p$  is the sum of all values calculated by the equation one segment earlier,  $m$  is the number of segments in the time period and  $CV$  is the respective current bid value and current ask value assigned to the market maker for the security.

161. The system according to claim 158, further comprising a display for displaying the bid and ask persistence statistics in a table.

162. The system according to claim 161, wherein the logic dynamically sorts the table based on a parameter selected by the user to reflect current market maker activity.

163. The system according to claim 158, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

164. The system according to claim 163, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

165. The system according to claim 158, wherein the logic filters securities from the selected set of securities that have a trade volume below a volume threshold.

166. The system according to claim 158, further comprising a memory for storing the statistic derived for each security, the stored statistics adapted for display as historical market activity.

167. The system according to claim 158, wherein the statistics are updated on a periodic basis.

168. The system according to claim 158, wherein the logic generates an alert if the statistic for one of the selected securities crosses a threshold value.

169. The system according to claim 168, wherein the threshold value is globally established for all selected securities within the selected set of securities.

170. The system according to claim 168, wherein the threshold value is established for a specific security.

171. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier,



and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask; and

a processor for executing logic to dynamically filter the data stream and, for each selected security from a selected set of securities, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus the selected threshold percentage of the last trade value.

172. The system according to claim 171, wherein the logic discards bids having a price higher than the last trade value plus the selected threshold percentage of the last trade value and discards asks having a price lower than the last trade value minus the selected threshold percentage of the last trade value.

173. The system according to claim 171, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived.

174. The system according to claim 173, wherein the logic analyzes each data set for a selected set of securities from the plurality of securities to derive a statistic indicative of temporary upward or downward price pressure, the statistic being calculated and updated for each selected security for each data set.

175. The system according to claim 171, wherein the logic analyzes the filtered data stream for a selected set of securities from the plurality of securities to derive and update a statistic indicative of temporary upward or downward price pressure.

176. The system according to claim 171, wherein the logic crossed market filters the data stream to exclude bids that are higher than a level 1 bid for an associated security and asks that are lower than a level 2 ask for an associated security.

177. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask;

a processor for executing logic to analyze the data stream for a selected set of securities from the plurality of securities to derive a set of statistics indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream; and

a display for displaying the set of statistics, the set of statistics being dynamically sorted based on a parameter selected by the user to reflect current market maker activity.

178. The system according to claim 177, wherein the logic to carry out the dynamic sorting can be turned off so that a relative display order stays constant but the statistic for each selected security is updated.

179. The system according to claim 177, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

180. The system according to claim 179, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.

181. The system according to claim 177, wherein the statistics are updated on a periodic basis.

182. The system according to claim 181, wherein the statistics are displayed on the display on a periodic basis.

183. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask;

a processor for executing logic to analyze the data stream for a selected set of securities from the plurality of securities to derive a set of statistics from the level 2 data indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream; and

a display for displaying a chart of the statistic over a period of time for one of the selected securities in a chart.

184. A system for tracking activity of a plurality of market makers relating to securities traded on at least one common exchange where the market makers place bids and asks, the system comprising:

a receiver for receiving a dynamically updated data stream containing level 1 and level 2 data relating to a plurality of securities traded over the at least one exchange, the level 1 data including at least the last trade price of each security and the level 2 data containing a bid price, a bid time, a bid volume, a security identifier, and a market maker identifier for each bid, and an ask price, an ask time, an ask volume, a security identifier and a market maker identifier for each ask;

a processor for executing logic to analyze the data stream for a selected set of securities from the plurality of securities to derive a set of statistics indicative of temporary upward or downward price pressure, the statistic derived for each selected security and updated based on the updated data stream; and

the logic including code to:

group the bids by price to generate a series of bid price groups, each bid price group but one containing bids of the same price for the bid price group, the remaining bid price group containing all bids having a price more than a specified number of price changes away from an inside bid price;

sum the volume of bids in each bid price group and summing the number of bids in each bid price group;

display the total volume for each bid price group and the number of bids in each bid price group on a display;

group the asks by price to generate a series of ask price groups, each ask price group but one containing asks of the same price for the ask price group, the remaining ask price groups containing all asks having a price more than a specified number of price changes away from an inside ask price;

sum the volume of asks in each ask price group and summing the number of asks in each ask price group; and

display the total volume for each price group and the number of asks in each ask price group on the display.

185. The system according to claim 184, wherein the logic filters the data stream and, for each selected security, the logic discards bids having a price lower than the last trade value minus a selected threshold percentage of the last trade value and discards asks having a price higher than the last trade value plus a selected threshold percentage of the last trade value.

186. The system according to claim 185, wherein the filter logic is conducted for a plurality of selected threshold percentages and for each selected threshold percentage a corresponding data set is derived, the statistic being calculated and updated for each selected security for each data set.